

April 12, 2011

[Follow on Twitter](#)

[Tony Bates](#)

- [Home](#)
- [Latest](#)
- [Resources»](#)
- [Tony's Publications»](#)
- [Tony Bates Associates»](#)
- [Contact»](#)
- [PostsComments](#)

You are here: [Home](#) / [Blogs](#) / The cost of online learning: \$12.50 an hour?

The cost of online learning: \$12.50 an hour?

March 22, 2011 By [Tony Bates](#) [2 Comments](#)



I'm frequently asked about the costs of online learning, and in the past I have always groaned and said, 'It all depends...'

While this is true, it is possible to give at least some ball-park figures, so here are some questions and answers.

\$12.50 an hour? Are you serious?

When I first thought about this question, I was going to say, 'Not really,' then give all the qualifications, but in fact, yes, I am serious, because FOR MOST FULLY ONLINE COURSES, as presently designed, this figure is not going to be far out (not more than plus or minus 20% – more likely minus than plus).

The cost to whom?

Essentially, the institution offering the program. In addition, students also have to pay for Internet access and their own computers

Where did you get this figure?

From tracking all the costs from a fully online master program at a large Tier 1 research university in Canada.

What's the basis for calculating the \$12.50 an hour?

There are several ways to arrive at this figure, but the simplest is to divide the cost of the course per student by the number of hours they spend studying. In my particular case, the breakeven cost per student (in essence, the full tuition fee) of \$12,500 divided by 1,000 hours of study.

Yeah, sounds easy, but how do you know what the real cost per student is?

By tracking all the costs of the program, including planning, overhead and administrative costs, as well as teaching costs, over a seven year period, and dividing by the number of course enrolments during that period.

Why use course enrolments, and not the actual number of students?

Because students take varying number of courses at the same time. I'm relating the cost to studying a single course.

OK, I'll come back to that in a minute, but let's stick with the costs of the program. What sort of program was it?

A graduate online program of 30 credits (10 courses each of three credits) using for nearly all courses a standard LMS, with discussion forums, a small amount of group project work on some courses, and two or three assignments per course, plus a good deal of reading, either online or in print. Courses lasted 13 weeks and students studies in cohorts. In terms of design, pretty standard (all right, boring), but students seemed to like it. Course completion rates were high (85%+).

So how did you get an average cost of \$12,500 per student?

Costs break down into several categories:

- planning: the time spent getting approval to go ahead with the course, agreeing the curriculum, and other advance planning for the program as a whole
- development: the cost of designing each course, and creating the online materials. In this case a team approach was used, usually with a tenured faculty member working with an instructional designer, with web design and the support of a librarian available as needed. Development occurred only in the first year of a course.
- delivery: the cost of offering the course each time. The main cost here is the online instruction. The first section would be delivered by the tenured faculty member; for any subsequent sections, an adjunct faculty member would be hired. For this program (graduate level) sections were capped at 20 students, and each course averaged two sections (i.e. 40 students). Each year a course is

offered, there are of course delivery costs. Also included here are costs of student administration (course registration, etc.) and librarian costs.

- maintenance: the cost of revising materials or reviewing the design of the course each year. This averaged between 15-25% of the development cost, each year.
- administration and overheads: this is the hardest cost to calculate. The whole program had a program director, who was a senior faculty member spending half their time on finding faculty to teach courses, tracking costs and development, dealing with any significant student problems, such as grade appeals, and any other problems that arose. While this cost was easy to track, overheads were more difficult. If an administrative cost could be calculated, it would be directly costed (e.g. course enrolment, library costs). The aim was to keep overheads to a minimum, which meant negotiating every identifiable indirect cost.

The total costs of the program over seven years came to just under \$3 million, with about 2,300 course enrolments, hence the \$1,250 per course enrolment, or \$12,500 for 10 courses.

Table 1 gives the proportion of costs over seven years by the above categories:

Activity	Cost (7 years)	Percentage
Planning	\$317,000	11
Program administration and overheads	\$880,000	31
Development	\$370,000	13
Maintenance	\$267,000	9
Delivery	\$1,019,000	36
Total	\$2,853,000	100

How did you calculate faculty costs?

This was negotiated. First, 'targets' were set for faculty workload. The aim was to make sure the teaching load for a fully online course was no more than that of a face-to-face course for a tenured professor. The target was also influenced by experience from earlier online courses of the faculty time needed for these kinds of courses.

Table 2: Work estimates for various activities for an online course : Days per course per year

	Course development	Course maintenance	Course delivery
Tenured Faculty	12.5	4.0	12.5
Instructional designer	12.0	2.5	0
Web/multimedia designer	7.0	4.0	0

In this research university, tenured faculty had a face-to-face teaching load of four three credit courses a year, which, allowing for research and administrative time, works out at 22 days per course (this includes all activities, including marking), so the total load for the tenured faculty member was less (16.5 days during delivery, 12.5 during development) for the online courses.

To get a rate per day, we took an average of \$600 a day, based on 200 'working' days a year. Thus the fee covered not only the faculty's teaching time, but also time for research and administrative activities,

and included benefits, etc. This meant a cost of \$7,500 for faculty time for development, and also for the delivery of each session of the course. For extra sections, adjunct faculty were paid on a basis of \$220 per student, for a total of \$4,400 for 12.5 days work per course per section for delivery.

There are some economies of scale possible, as each extra section enrolled reduces the average cost per student. However, if adjuncts are to be properly supervised, not too many sections can be added without requiring another tenured faculty member. In any case, economies of scale may be purely theoretical if the demand for extra places is not there. Even capped at 40 students per course offering, this program was by far the largest in terms of numbers at a graduate level within the Faculty.

OK – so how then did you come up with the figure of 1,000 hours of study for a master program?

We had no empirical basis for this. However, part of the instructional design is to make sure students are not overloaded with readings and activities. Since nearly all the students taking this program were part-time, they could take up to five years to graduate on what was theoretically a one year full time course. This would mean taking a minimum of two courses a year to graduate. This meant that at a minimum they would need to spend 16 hours a week studying, on top of regular working.

Generally we tried to design the course so that an average student in the program could get through all the work (including assignments) on an average of about eight hours a week over a 13 week semester, or a total of 100 hours per three credit course. This is relatively comparable to the workload for a full time campus-based student taking three credit or lecture hours a week over 13 weeks, with a ratio of two hours out of class study for every hour in class (equal roughly to nine hours a week study for each course). Either way, you end up with roughly 1,000 hours for 10 courses at 100 hours per course. Of course some students will get through the program studying less, and others will spend more.

How would this compare to an undergraduate course?

The real difference in cost comes through class size, or more accurately, instructor: student ratios. So if we are looking at a final year undergraduate class with an average instructor:student ratio of 1:30, delivery costs per student per course offering would be one third less. (Note it's not the total number of students in a class that matters, but the instructor:student ratio). However, delivery costs constituted only 33% of the cost of the program, so increasing the instructor: student ratio by even a third would result in less than 10% in cost savings, i.e. about \$1.25 per hour. However, we need some empirical figures to back this up.

For very large first or second year undergraduate classes, we probably would need a radically different course design, so it would be hard to make comparisons.

Doesn't this seem very expensive?

Well, it's a lot less than I pay my dentist, and far more fun.

With a graduate program from a Tier 1 research university and a relatively low instructor:student ratio, we are at the top end of online learning costs. I'm sure the university would argue that this results in a very high quality course with high completion and student satisfaction rates.

But it is expensive. It would mean a four year undergraduate course, if delivered fully online, coming out at about \$40,000. How does that compare to face-to-face teaching? Well, we really don't know, as it's not costed in this way. But let's take the University of British Columbia operating budget, which a

couple of years ago was around \$1.5 billion a year, and divide that by 40,000 students. That works out close to \$40,000 per student.

How could we get costs down?

Well, the first step is to know the cost, and where it's going. The planning, administration and overhead costs in this program come to over 40% of all the costs. I am sure these could be looked at for some savings.

The costs for faculty also have been calculated at a generous rate, not so much in terms of salary, but in terms of covering both research and administrative time from within the online teaching budget. In a cost recovery program, this is necessary to enable extra full tenure staff to be hired, but in a publicly subsidized program, the daily rate might be calculated as a proportion of salary set aside for teaching each year, i.e. $\$48,000/12.5 \text{ days} = \$3,840$, instead of \$7,500. This would really impact on the cost of delivery. In a two year college, with teaching loads of up to 20 hours a week, the average cost per teaching hour would be much lower, even without considering the lower salaries paid. However, this raises the question: where does the money come from for faculty's research and administrative activities?

Instructional design is another area where costs might be saved. However, the trade-off here is managing faculty workload and saving faculty time in creating graphics, loading software, etc. Instructional designers and web designers are cheaper than faculty, and the aim is to make best use of the faculty member, not waste their time on fiddling with the technology.

Radical re-design is probably the best option though for reducing costs. Even here though there are limits. For instance, it might be possible to save some development costs by designing a course around open content. Again, though, development costs are a relatively small part of the overall costs (13%), and using open content might well radically increase the amount of time spent on delivery, and thus lose any economies of scale.

Probably, all activities need to be looked at to get costs down without threatening quality.

Conclusions

You may well challenge the cost methodology and the assumptions that drive the costs in this example. You may also challenge the teaching model for online learning.

Good: then come up with a better way of looking at the cost issue. We do need more open discussion about the costs of not just online learning, but all teaching in universities and colleges. It is lazy and unjust to merely keep increasing tuition fees rather than looking at new ways of developing and delivering programs that can reduce costs without jeopardizing the quality of teaching. This is particularly incumbent on those of us who believe in online learning.

ShareThis

Filed Under: [Blogs](#), [costs and benefits](#), [Monthly Feature](#), [Strategies, planning and management](#), [Tony's Blog](#), [Tweets](#) Tagged With: [Blog](#), [costs](#), [Tony Bates](#)

Comments



1. *Jim Farmer* says:
[March 24, 2011 at 5:24 pm](#)

Using data from the U.S. National Center for Education Statistics two years ago we estimated the cost of a student to be about US\$10.00 per 50 minute hour. This is a fully allocated cost based on national statistics for instructional costs and allocations of the indirect costs related to instruction. Full-time equivalent enrollments gave us a substitute for class time. We used one hour of instruction for 13 weeks for each credit hour.

Likely accurate to about the same plus or minus 20%.

And when I ask people(business types included) to guess what that number is, I sometimes get answers off by an order of magnitude, that is from US\$1 to US\$100.

[Reply](#)



2. *Tian Belawati* says:
[April 10, 2011 at 9:05 pm](#)

Tony, thanks for this. You may be interested in an article I wrote several years ago, also on cost. I will e-mail you.

[Reply](#)

Speak Your Mind

 Name * Email * Website

Archive

Select Month

Recent Comments

- [Wanda](#) on [Distance Education Journals](#)

I love the university atmosphere but elearning has its place in today's technological world. Especially with today's Gen Y...
Posted Apr 11, 2011

- [CarlBrewer](#) on [What should the Canadian government do to increase access to post-secondary education?](#)

@Elizabeth; I must say that the "create your own certificate" idea is a very good idea that I can really second!...
Posted Apr 11, 2011

- [Eric Gesinski](#) on [Is for-profit online learning the answer for developing countries?](#)

A solid post on education to (and from) other countries. I think one of the primary questions here is...
Posted Apr 11, 2011

- [Tony Mays](#) on [OERs: the good, the bad and the ugly](#)

In developing materials for a new DE course, we usually cast around for what already exists - even just to...
Posted Apr 11, 2011

- [Tian Belawati](#) on [The cost of online learning: \\$12.50 an hour?](#)

Tony, thanks for this. You may be interested in an article I wrote several years ago, also on cost. I...
Posted Apr 10, 2011

- [Marc Lijour](#) on [New web site design for Contact North](#)

Interesting, Contact Nord is using Free/Libre Open Source Software (FLOSS).
Posted Apr 10, 2011

- [Jamal Stephens](#) on [Great expectations for e-learning in 2010](#)

I love the concept of e-learning, because it means that more people will have the opportunity for greater knowledge. I am...
Posted Apr 07, 2011

- [Muvaffak Gozaydin](#) on [International comparisons in higher education: the OECD's Education at a Glance](#)

I agree with Business Intelligence Trainer It is a matter of demand and supply. More people want to go to university...
Posted Apr 06, 2011

Tags

[Africa](#) [Bates](#) [Blog](#) [Campus](#) [Technology](#) [Chronicle of Higher Education](#) [Commonwealth of Learning](#) [conference](#) [costs](#) [course design](#)

[Distance Education](#) [e-portfolios](#) [eSchool News](#) [faculty development](#) [games](#) [Inside Higher Education](#) [Kolowich](#) [learning management systems](#) [mobile learning](#) [OER](#) [Online Educa Berlin](#) [open content](#) [open educational resources](#) [virtual worlds](#) [Web 2.0](#)

You can see a [much larger tag cloud here](#)

Tony's Calendar

[Click to see Tony's schedule](#)

Events

- [New web site design for Contact North](#)
- [Creativity in OERs: call for papers](#)
- [IRRODL: Call for papers on 'emergent learning'](#)
- [Webinar on Chinese online teaching](#)
- [Informal learning with do-it-yourself online courses](#)

[Return to top of page](#)

Copyright © 2011 Tony Bates · website by [Robert Ouimet](#) · [Log in](#)

»